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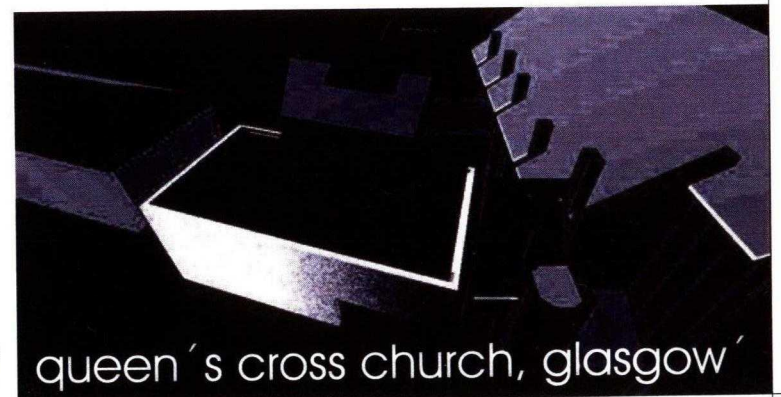
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`conversion & extension of



queen's cross church, glasgow'

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1. introduction

1. Introduction

When visiting Glasgow for the first time in 1986 I got to know the city with its various historic buildings. At that time I did not really know what made some of them so special, interesting or even pleasant to look at. I later discovered that these were mainly buildings designed by Charles Rennie Mackintosh (CRM; 1868-1928). Now after studying architecture in Germany and having visited Glasgow several times, including a half-year placement in an architect's office, I hope to know a bit about this architect and designer, his life, work and philosophy. Mackintosh's only completed church, St. Matthew's Free Church, now called Queen's Cross Church (QXC), has always fascinated me. The atmosphere, the dramatic contrasts of natural lighting, materials, details, colours and the simplicity of a sacred building, which I have never experienced before, characterise Queen's Cross Church.

As I have visited the church very often to learn more about its history, the detailing, symbolism etc. I have met some very kind members of the Charles Rennie Mackintosh Society (CRMS) who have been using the church as their headquarters since 1977. During these stays I had the chance to find out more about the building and the architect behind it.

Therefore it was ideal for me to combine my fascination for the church and its architect with my diploma project. After the CRMS was able to purchase QXC from the Church of Scotland in 1999, it planned to build an extension in a gap site adjacent to the church housing the CRMS and meeting visitors' requirements.

Spending my half-year out at McKeown and Alexander Architects (McKA), who won the competition with their proposal for the development of QXC, I realised that progress was fairly slow and eventually the project stagnated. So I was motivated enough to write my own feasibility study about the QXC-Project.

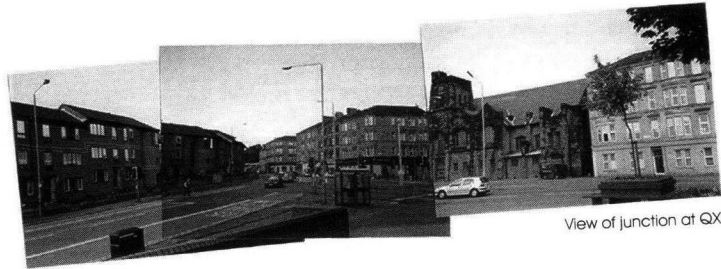
After 4 weeks of preparation in Glasgow I started my working schedule back in Germany.

The following report draws on McKA's analyses of QXC, which I further developed with my own ideas. In addition, David Mullane, the former director of the CRMS, and a CRM and QXC authority, acted as my 'client' for this project.



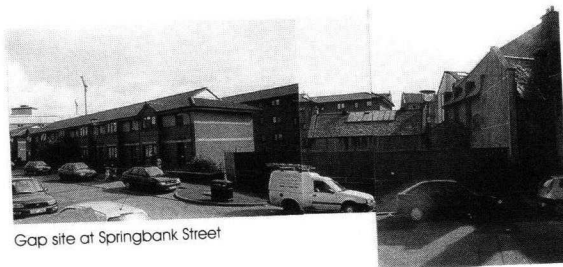
View of junction at QX

2. existing situation



2. Existing situation

The immediate urban environment of the church is varied and generally unsympathetic to the high architectural order of the church. The church is flanked on Garscube Road to the south by low grade industrial units beyond the neighbouring tenement. To the west the existing four storey sandstone tenement is a neutral neighbour. Here the ground floor function is commercial and undistinguished. To the north Springbank Street manifests as a new build housing development of three storey / two storey buildings and again is undistinguished. Immediately adjacent to the north gable of the church is a decaying hoarding protecting a gap site between the church and the new housing block. To the south the traffic junctions serving Maryhill Road and Garscube Road annex the church to the north side. The southern flanking buildings are relatively new units built by Queen's Cross Housing Association. Traffic at this point is heavy and noisy. In short the church could be regarded as an architectural oasis in a largely nondescript urban environment. The area is also highly populated with children and ongoing minor vandalism is a real issue. Any intervention should acknowledge this factor.



3. Redevelopment of Queen's Cross Church

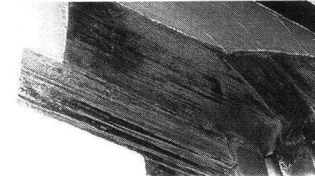
Over 100 years after the church was built its present exterior condition is quite bad. Only the most urgent redevelopment measures can be named in the following chapter. Visible major damages of the exterior stonework caused by the heavy and noisy traffic are a big issue. In addition rain has caused abnormal dampness in some parts of the exterior wall. Experts should be consulted on this damage.



Damaged stonework



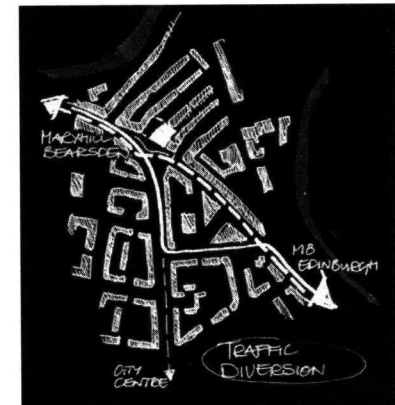
Existing metal grids & perspex shields



Dampness in stonework

The traffic situation at Queen's Cross should be reconsidered to minimise the effects of pollution on the stonework of QXC. Traffic from Maryhill/Bearsden for the M8 Edinburgh should follow the route to the City Centre, then turn left at the next junction to rejoin the through route. The closure of Garscube Road to traffic at Queen's Cross would create an oasis which would acknowledge the importance of the sensitive architecture of QXC.

A traffic-calmed square would emerge in front of the church and the blocked-off lane could be used for visitors' parking of coaches and cars.



Traffic handling at QX

A further redevelopment measure for the stonework would be the cleaning of the exterior walls to give back the red sandstone its colourful freshness and brightness and to remove the dust and dirt of the past. It has to be rethought carefully whether high-pressure water would be a suitable means since the detailed stone carvings of the church must not be damaged.

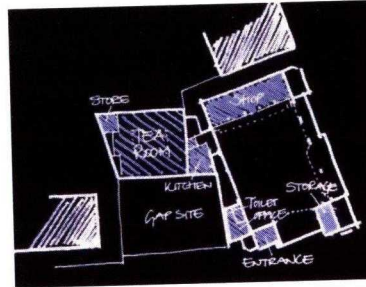
The slate roof should be checked of leaks and damages to the gable-end, the gutters and the downpipes.

The translucency of the window glass both the original leaded and the stained glass could be considerably improved by removing the existing perspex window shields or the metal grids and replacing them with a new protection system (to be consulted with experts).

4. new conception

4.1 Purposes

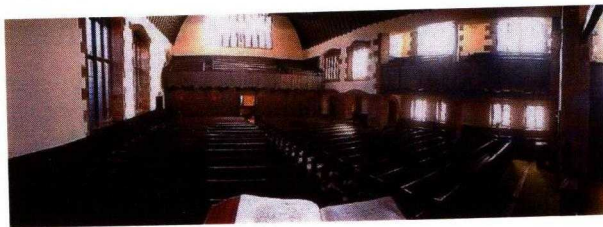
As it is the aim to clear all the spaces in the historic building presently occupied by the CRMS (such as offices, archive, souvenir shop, storage, kitchen, toilets), there is a need for a new building adjacent to the church. It should provide enough space for all demands of the Society and the statutory authorities (Historic Scotland, Planning+Conservation, Building Control). It is also important to know the history of QXC to rebuild the original state. There were several major alterations particularly inside the church which are to be restored to the original state in my scheme.



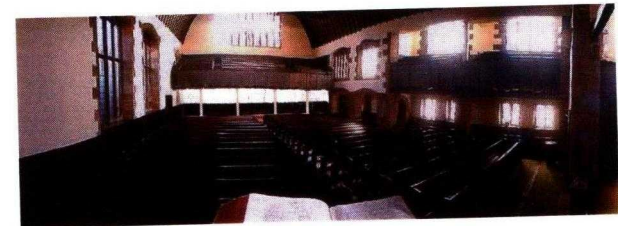
Spaces occupied by the CRMS

4.1.1 Church building

The 'Howarth-Screen' proves a sensitive issue because it reflects a certain period of the church history. Nevertheless I believe that the original intention of the nave's main space was to see the rear gallery floating above the floor, just held by a thin column structure. The natural light and the atmosphere inside the church would be completely different if the windows below the gallery allowed light to get into the nave. The screen, which was originally put up to house Sunday classes in postwar times, would no longer hide the columns. The screen should be documented exactly before being removed. The wooden panels which had once been pews in the rear nave, could be used to repair damages in the original wooden panelling. The double door of the 'Howarth-Screen' could link the gable-end of the session house, which houses the new archive, with the extension building. Other parts of the screen could be used for a new door connecting the church hall with the gap site building. It could also be exhibited in the church's new exhibition area or the Hunterian Art Gallery.

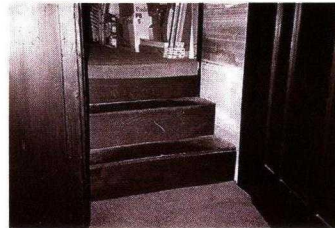


Panoramic view from pulpit

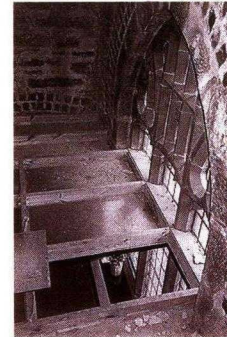


'Howarth-Screen' taken off

A doubtful issue appears to be the floor height of the chancel and the organ chamber. It does not seem to be original when one compares e.g. the existing original plans with the present state or when one looks at the untypical straight edge of the top step in the chancel. Thus I presume the top step was added. It should be removed both in the chancel and in the organ chamber.



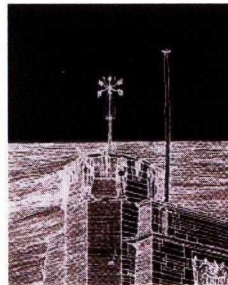
Steps in organ chamber



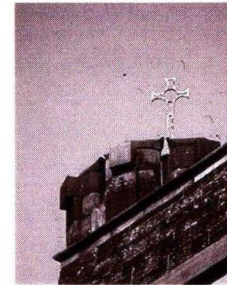
Lower ceiling in west staircase

Another question is the void space in the west staircase leading up to the side gallery. Because of the heat loss a lower ceiling was put up here once. Unfortunately it divides the big window above the west entrance of the church, so it should come down. The small hatch above leading to the church tower should be closed and insulated. If the walls above that window should be plastered or left rough would have to be discussed.

There were originally three chairs on the chancel. The missing one in the middle which had two arms was the minister's. It would be possible to reproduce it with reference to the chair in the Mackintosh House at the Hunterian Art Gallery which is a duplicate CRM made for his own use. The metal cross at the top of the tower should be replaced with the finial shown in CRM's perspective drawing.



Presumed original finial



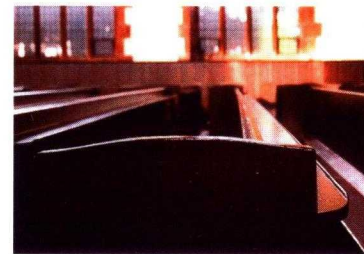
Metal cross

4.1.2 Church hall

After the replacement of the wooden panels in the hall around the nineteen-eighties because of rot, they were unfortunately painted black. Therefore a change of colour from black into dark brown, like the colour of the roof trusses or the pews, is appropriate.



Roof trusses of church hall



Pews in the nave

The present floor sheeting in the hall is not original. It should be removed and the old wooden planks underneath should be restored (floor height!).

The existing toplight is leaking and should be replaced by a new one including a black out system.

The existing light fittings both in the hall and in the church should be replaced by an installation of background light to illuminate the building interior. In this detailed advice from theatrical stage lighting designers is necessary. The present lighting in the nave should be removed from the original ventilators in the vaulted ceiling. Old photographs of a gas fitting, which hung behind the chairs on the chancel, could form the basis for the design of lights hanging from the ceiling of the nave.

The hatch between the church hall and the existing kitchen is not original and should be removed.

A remake of the original lantern should be placed above the hall side entrance.

4.2 Realisation

The purposes of the project are to strengthen the status of the building as a masterpiece of CRM's works and therefore to encourage the awareness and to emphasise its role as a gateway for CRM sites in Glasgow and surrounding areas. Further improvement aims are necessary in order to increase visitor numbers, visitor stay, visitor spend, quality of visitor experience and to simplify the visitor access.

4.2.1 Church building

The principal doors to Garscube Road should stay open during operating hours but should signal `we are open` and not `enter here`. As safety and control is difficult at this point new glazed screens which could be installed in front of the existing doors, openable for escape purposes only, should work as a subtle signage. These translucent screens would be vandal resistant and would be capable of receiving back projected imagery. This would ensure visibility both in daylight hours and during hours of gloom and darkness.

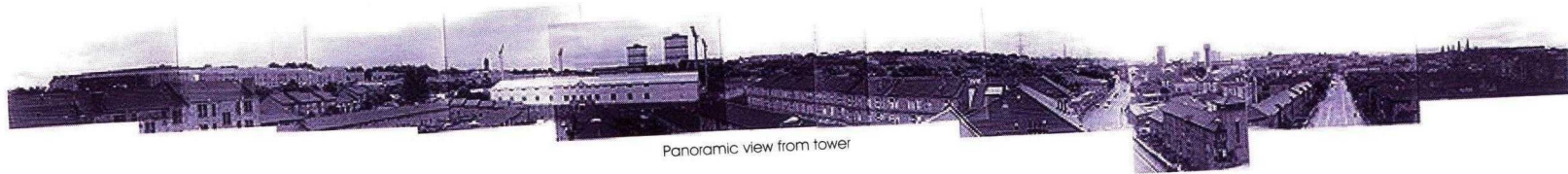
4. new conception

Inside the church there should be a uniform but subtle system of signs and explanation plates. The emergency exits should be marked by back projected engraved pieces of glass.

The cloak room in the session house should be reorganised. The existing partition wall should be removed, the small window towards the yard could have a blackout blind and the room could be used as an audio-visual area for visitors, where permanent information is shown.

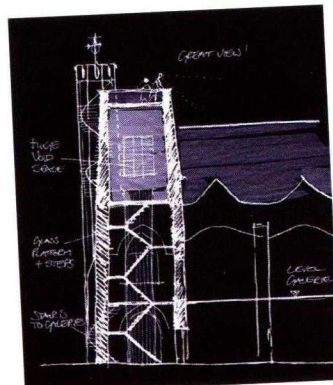
The former warehouse gable-end should be removed carefully, the original session house gable-end should be resurfaced.

The former boiler house in the session house basement should be closed, the stairway should be filled up. The oil tank and the pipes should be removed, as the new building would provide room for the heating system. A new gas supply should be installed.

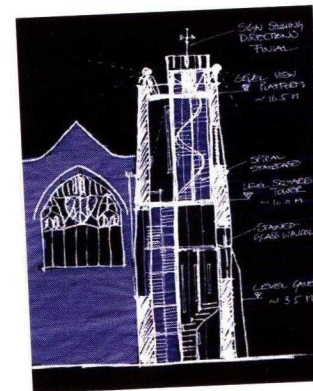


Panoramic view from tower

The attraction of QXC could definitely be increased by opening the church tower to visitors. It would be possible to put a staircase into the organ chamber leading up to the huge void space in the square tower. A smaller spiral staircase could link the square space with the platform on top of the tower. Careful consideration would have to be given to the construction of the new stairway since it would be visible inside the nave. It should be subtle and modern. Glass fins put in vertically into the big organ openings could cover parts of the stairs and could at the same time function as a reminder of the typical vertical structure of organ pipes.

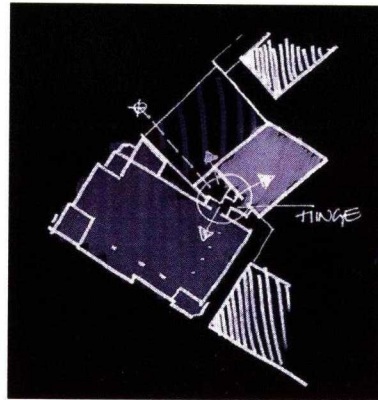


Feasible staircase in tower

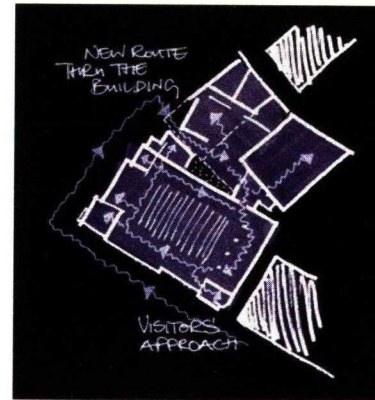


Feasible staircase in tower

The organisation of a new visitor route through the church should also be well considered. The question of a suitable entrance should be addressed. From a basically practical organisational point of view the existing kitchen and cloakroom offer most developable space for a crush lobby. It works well as a natural hinge between the new building, the church hall and the church. More vitally, the entrance at this corner offers the most spectacular view of the church, loggia, balcony and chancel at the same time.



new church entrance



Proposed visitor route

The proposed visitor route through the church could be as follows:

Entering the church one could get a first and overall impression of the space, the light and the atmosphere. Then the route leads on to an information and exhibition area underneath the rear gallery. After viewing the rear and side galleries the church tower could be climbed.

The next new element after the chancel and the minister's vestry would be the audio-visual room, where short films about the church history or CRM could be shown. Alternatively, computers could introduce the CRM CD-ROM to visitors.

Going back to the 'hinge' and entrance one would have the possibility of seeing the church hall or of returning to the new building for having a cup of tea, spending money or using the toilets.

4. new conception

4.2.2 Church hall

As the existing kitchen adjacent to the hall is no longer relevant the hinge building has to be reorganised. Its roof will be simplified into a single pitched roof, the exterior wall of the kitchen and the brick wall limiting the small yard will be removed. Here the new link between the historic and the new building could be realised sensibly. The small toplight in the hinge building could be renewed to spotlight the new church entrance. Although the church hall was probably never furnished according to the original plans new chairs and tables would be necessary to use the hall for events, conferences, receptions or parties. A careful selection has to be made to find a subtle practical furnishing - perhaps a special design from the School of Art could meet the requirements. The heating pipes should be adapted at least on the west side of the hall to allow a door link to be put in between the new kitchen and the church hall.

4.2.3 Church exterior & surroundings

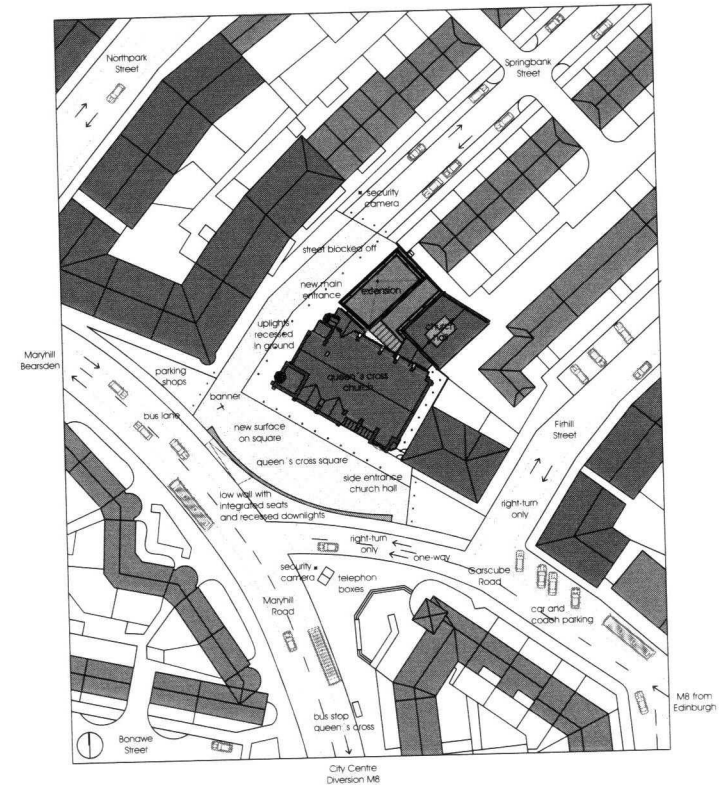
The neighbouring tenement gable at the east side of the church in Garscube Road should be resurfaced to improve the quality of the side lane and to show the contrast of the red and blond sandstone.

Springbank Street should be blocked off at the beginning of the gap site to create a pedestrian zone around the historical building. Firhill Street should be reopened. As mentioned in Chapter 3 a diversion of Garscube Road straight lane would create a traffic-calm transition with an open space in front of the church at Queen's Cross. In order to get a visible and physical barrier between the street and new Queen's Cross Square, this platform could be set on a higher level - one height that surrounds the church like a frame. To clarify that difference in height, a low wall with integrated seats and downlights could be set. The square should be pedestrianised, only coaches would be allowed to use it as a drop off for visitors as well as vehicles carrying handicapped people. Alternatively two or three steps with integrated downlights could enclose the square. A new street surface, e.g. granite stone, should surround the church to emphasise this sensitive area.

In addition to the glazed main doors of the church an external signage is necessary. A banner could be placed at Queen's Cross Square showing operating hours or special events and exhibitions.

In order to secure the area around the church the present security camera at Queen's Cross should be moved next to the telephone boxes. An additional one should be placed in Springbank Street adjacent to the new building.

New exterior lighting surrounding the church should carefully elevate the building slightly out of the context to underscore its importance. Uplights recessed in the ground could subtly provide an external reading of the building.



5. New scheme

5.1 Principles

The intention of a new building linked with QXC is to provide space and facilities for the CRMS and the QXC visitors. Furthermore the extension should represent modern architecture of high quality.

What is high quality modern architecture?

I believe there are several factors playing together to create that kind of architecture: brief, analyses & reactions, consultation, organisation, proportions, details, materials & finish and light.

5.2 Realisation

Designing a new building linked to an old one is a very difficult task. QXC plays a significant role in the history of Glasgow, CRM and architecture. Thus a wide background knowledge and a detailed analysis is indispensable.

5.2.1 Brief

As there is no official brief from the CRMS so far, I drew up a list in co-operation with David Mullane which shows the required space. Therefore the brief is as follows:

- Entrance (barrier free)
- Reception
- Bookshop and storage (desk for a shop manager)
- Toilets (to meet wheelchair and audience demands in the main hall & separate staff toilets)
- Coffee bar
- Kitchen (linked to the church hall)
- Office space (director, information manager, web-master)
- Boardroom (council meetings etc.)
- Archive and reference library
- Room for a gas heating system

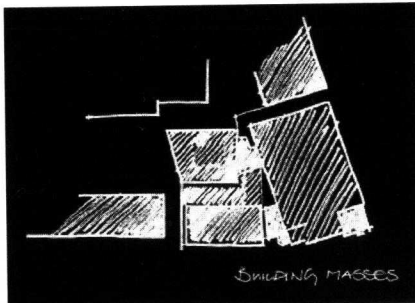
5.2.2 Analysis and reaction

A detailed analysis of the urban situation and the neighbouring buildings is mentioned in Chapter 2 of this report.

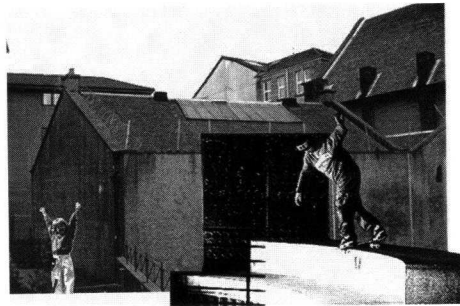
The site itself shows a pleasant break in the urban block, a break that somehow lets two extreme contrasts like the church and the housing block coexist. But since there is nothing in this space it becomes a public dump and an illegal playground. I believe this site is destined to link contrasts of size, shape, age and function. My reaction shows a building that uses the neighbouring site to its maximum size and closes the urban block without creating a new gap. Consequently I had to link two very different types of buildings, a two storey housing block from the nineteen-eighties with an art nouveau church from the turn of the last century.

The extension is an introverted sculpture-like building, which does not reveal its structure or function and does not stand out. It wants to underline the importance of the historical site. It also links two different building lines in Springbank Street.

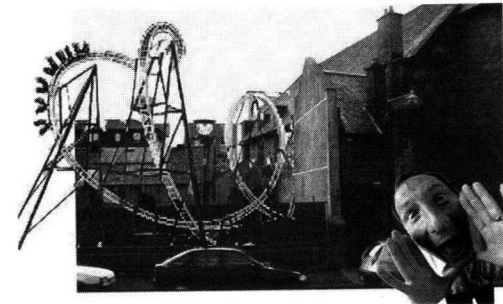
A concrete wall to the north appearing as a shield against vandalism clearly defines the site towards the neighbouring housing block. Kids living next door are allowed to use this wall as a creative screen to paint on or to play with.



Building masses



The kids' proposal



The kids' favourite proposal

5.2.3 Consultation

I tried to discuss the project with many different people involved, such as CRMS members, CRM experts, the architects, friends and last but not least the kids from next door. These kids who live in the Home for displaced children told me about the gap site always having been their playground. They did not care about the significance of QXC, its famous architect and its positive effect on the Maryhill district. They wished to have either a skatepark or a roller coaster for 'their' site.

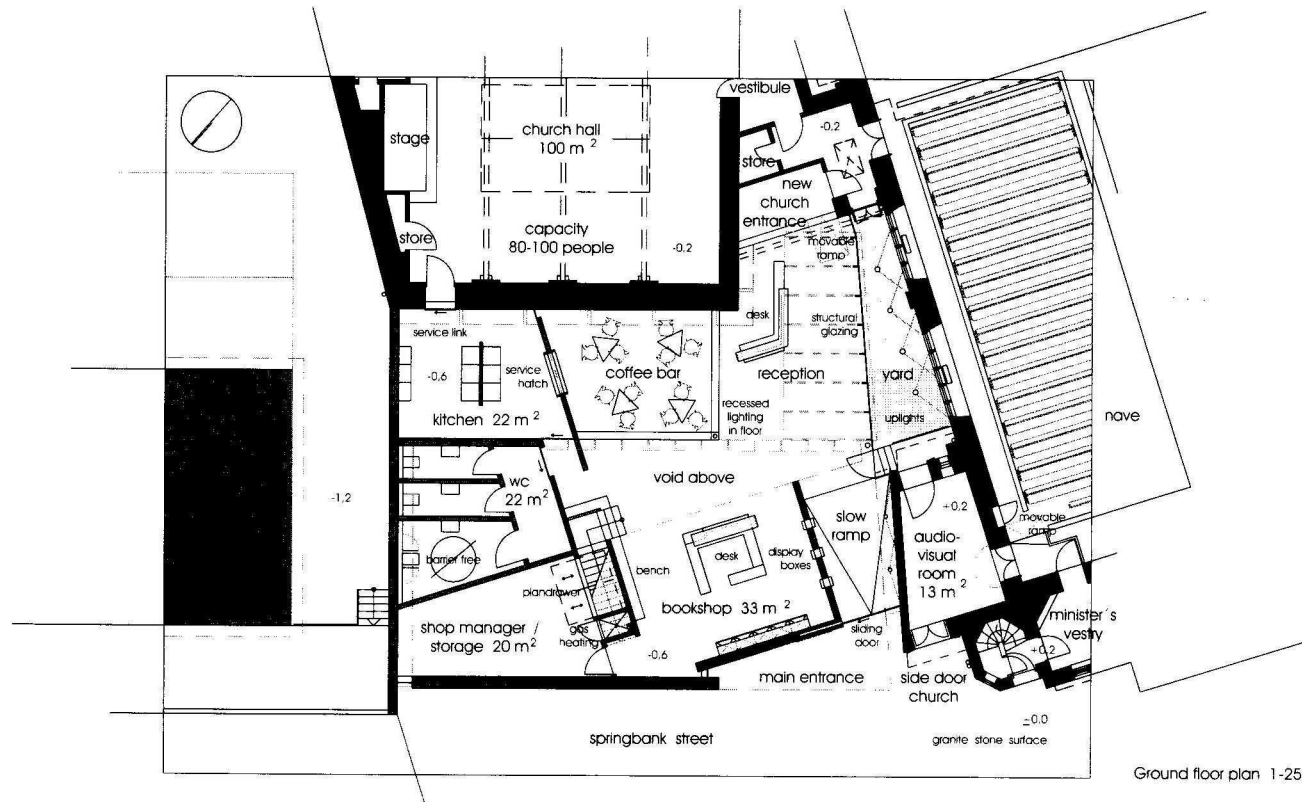
I believe a major problem in the neighbourhood of QXC is the lack of green areas or parks especially for children - therefore the gap site is an ideal substitute for such a need. We should try to integrate these kids into Society events or church maintenance, however this might be realised.

5.2.4 Organisation

The condition for a practical and functional organisation of the new building is the opening up of the present yard towards the gap site, the hinge between old and new.

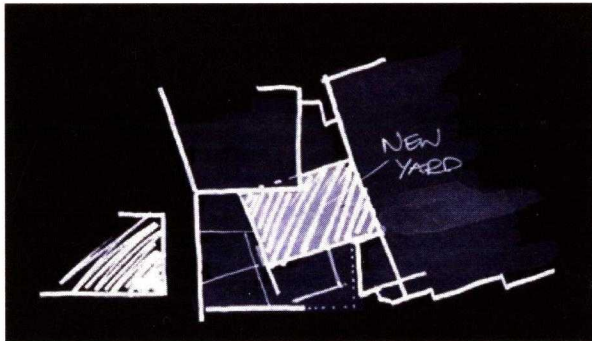
As mentioned in Chapter 4.2.2 the brick wall of the yard, the exterior kitchen wall with its pitched roof will be removed to allow a spacious, bright yard to be introduced.

The basis of a good organisation is an obvious entrance. In this case a bright recess in the dark exterior wall shows the only opening in the street elevation. Entering the building through that niche visitors first experience the contrast between the top lit red sandstone of the session house gable-end and the bookshop wall with its display boxes. A slow ramp finally leads them to the reception area. This foyer can easily take on a coach load of fifty people.

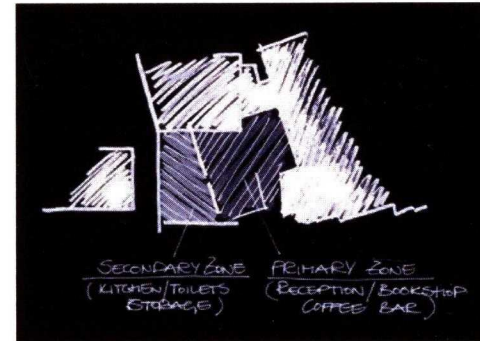


Simplifying different building lines on the site, the yard as a whole shows a basic geometrical shape referring to the church's north exterior wall. Apart from the wall limiting the site to the neighbouring building another one divides it into two sectors:

- Primary, active zone: entrance, reception, bookshop, coffee bar
- Secondary, passive zone: kitchen, toilets, storage

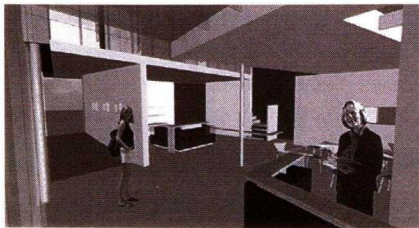


Proposed Yard

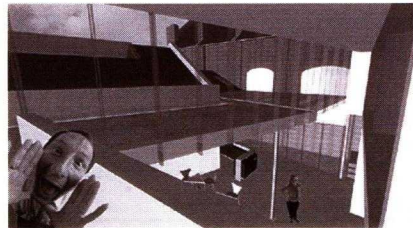


Zones

The space in the primary zone merges horizontally (no dividing walls) and vertically (huge glazing, void space). So the visitor can experience the interior as regards space (open zone), elevation (ramp onto a different level) and light (direct light, contrast dark-bright, holographic glass, artificial lighting).



View of reception, bookshop & entrance



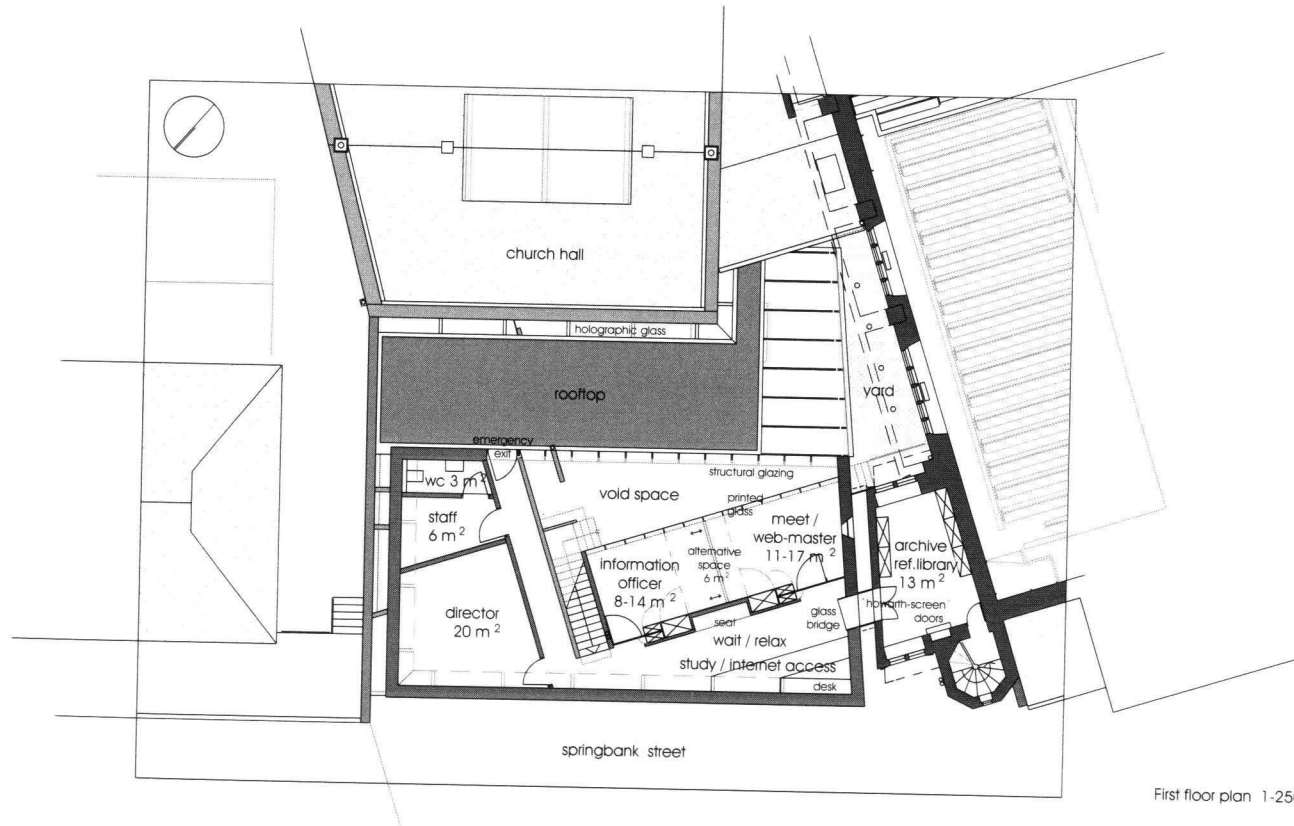
View of void space from upstairs



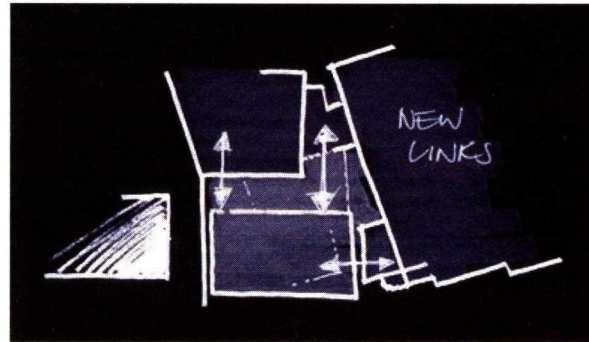
View of bookshop & offices from upstairs

While sitting in the coffee bar, visitors can enjoy the open view towards the church wall; they can watch people entering, leaving and spending time in the bookshop. They can even notice movements upstairs.

The whole ground floor is a barrier free area; wherever there are steps to climb movable ramps can be easily used to meet wheelchair demands. The whole CRMS-management area, located on the first floor and separated from the public zone, contains offices, staff day-room, boardroom, toilet and a study area. The upper level is linked to the session house, where the archive and the reference library are situated. This link enables CRMS employees to get into the church without using the public area on the ground floor.



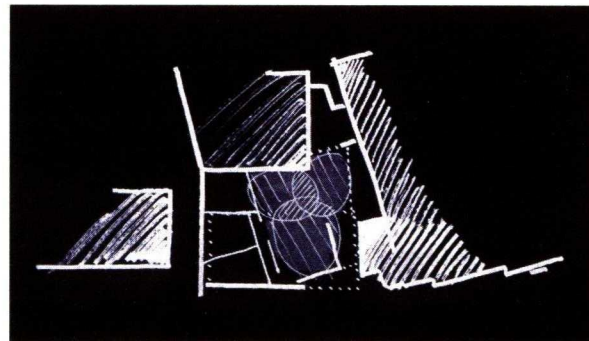
In order to preserve the historical building sensitively, the extension building is just linked to the old one in three points:
 The main link is situated in the former kitchen which is now the new church entrance. The second one links the new kitchen with the church hall (this connection could be used for catering during events) and the third link is the first floor glass bridge to the session house. It connects the archive/reference library with the new building. All contacts between old and new are realised subtly with transparent 50 cm glass panels.



New links

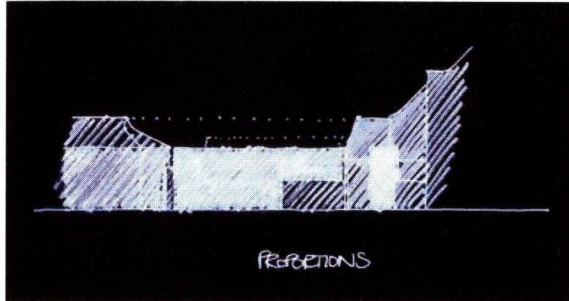
5.2.5 Proportions

The proportions of area in the new building describe a comfortable size for a maximum capacity of fifty people. Merging spaces on the ground floor can change the definition of areas temporarily.

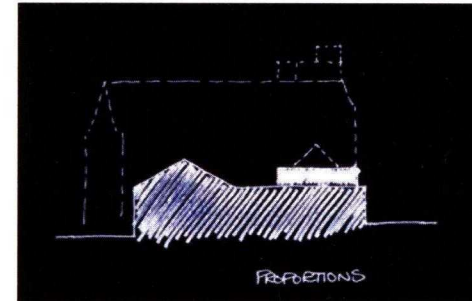


Merging zones

My intention to close the gap towards Springbank Street led me to concentrate volume to this side. So I used the existing eaves levels both of the session house and the housing block to set a limit of height for the new building in between. The only opening in the facade shows a human dimension and clearly marks the main entrance. The two story building describes a well-fitting counterpole to the volume of the church hall.



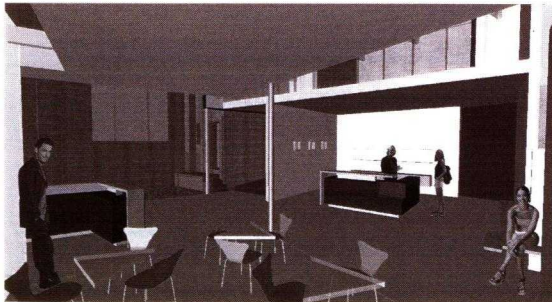
Proportions in size



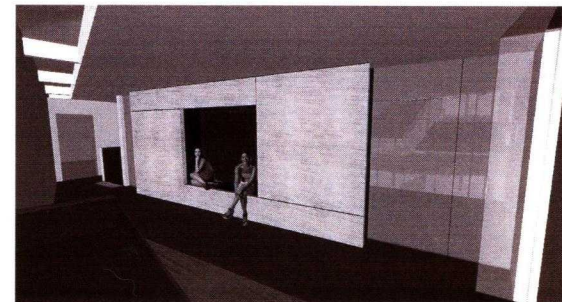
Proportions in size

5.2.6 Details

Another characteristic of high quality modern architecture is a special detailing of certain pieces of furniture. Of course it is not possible today to design the interior to such an extent CRM once did it. Nevertheless the architect should design typical elements to give the building an integral character. In my scheme I have focused on three pieces of furniture: the reception and the bookshop desk on the ground floor and a special multifunctional wall on the upper level.



Main space on ground floor

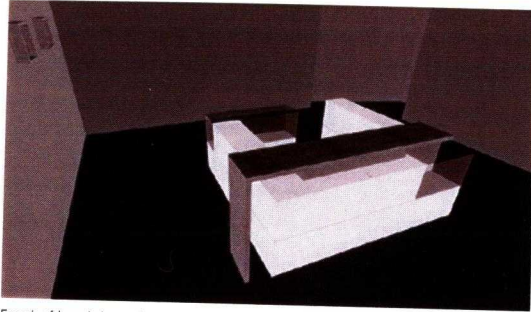


Outer office upstairs

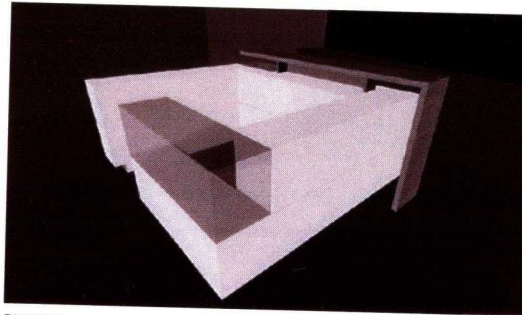
5. new scheme

'conversion & extension of queen's cross church, glasgow'

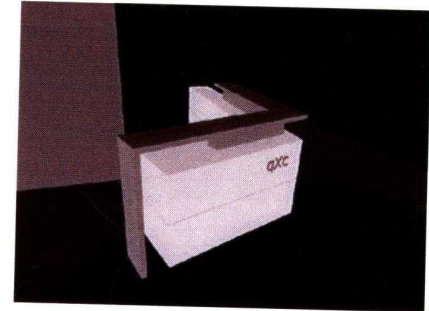
The desks should be detailed exactly, high quality materials should be used. Both should have a wooden 'frame' which marks the front and light fittings in their bases. In addition the bookshop desk contains glass display cases.



Front of bookshop desk

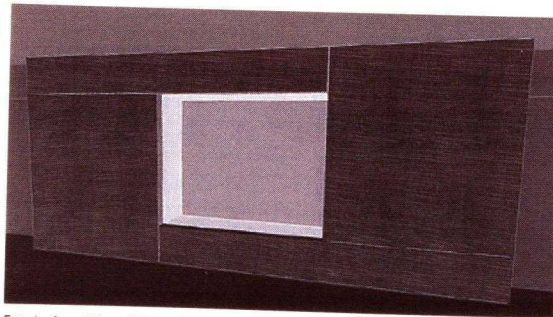


Display boxes on rear side

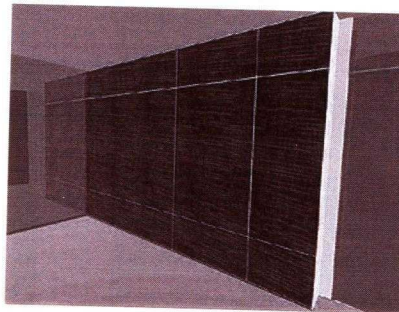


Front of reception desk

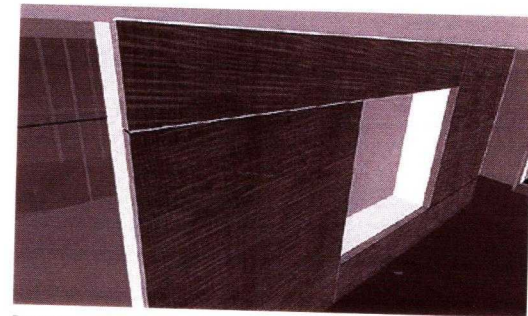
The multifunctional wall can be used from different sides. The front facing the aisle offers a niche with an integrated seat for chatting, reading, waiting and relaxing. It reflects the idea of CRM's window niches designed for the School of Art or The Hill House. Wooden boards with in between shadow gaps cover the front of the wall. Frosted glass panels provide hall cupboards at its sides. The rear of the wall facing the offices contains filing cabinets and the track for a sliding wall inside. This wall divides the office spaces. During a meeting the boardroom can be enlarged temporarily, the other office can be used at its minimum size. Alternatively an additional small space can be offered in-between.



Front of multifunctional wall

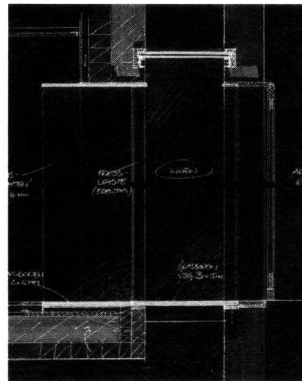
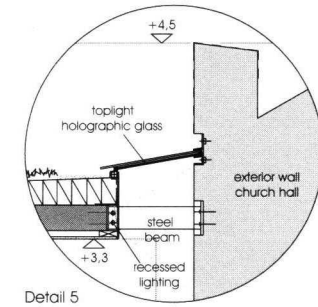
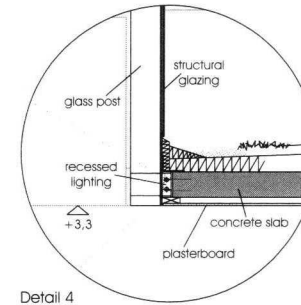
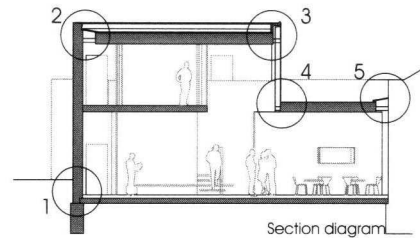
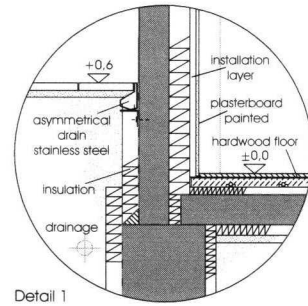
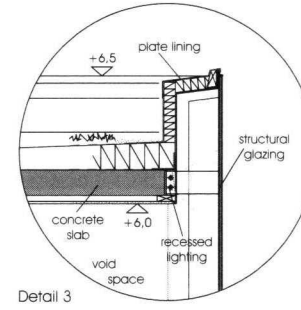
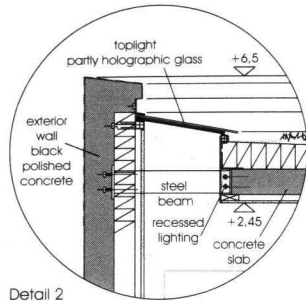


Rear of multifunctional wall

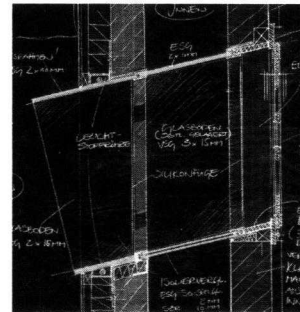


Front of multifunctional wall

There are particular construction details which characterise my design of the building like the toplights, the structural glazing or the glass bridge.



Sketch section glass bridge



Sketch plan glass bridge

5. new scheme

conversion & extension of queen's cross church, glasgow

5.2.7 Materials and finish

The materials of the new building should be selected carefully to achieve durable high-quality architecture. The specific use of modern materials e.g. glass, stainless steel or polished concrete clearly marks new elements in an old setting. I would like to pick out some materials which characterise my design:

The exterior

A black polished concrete facade which is unevenly finished, almost like a work of art, shows a durable, vandal and graffiti-resistant wall. It is a high-quality modern finish which was, after many tests, first used at the Art Gallery in Vaduz, Liechtenstein.

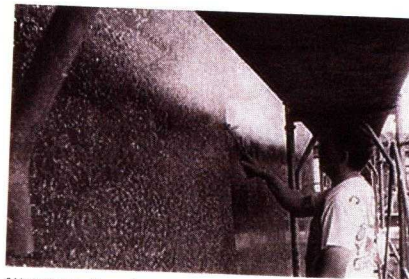
The concrete mainly contains crushed black additions with some green inclusions (black basalt) and unbroken additions (sand, gravel, blast-furnace cement, ferric oxide pigments).

The monolithic concrete is ground down in a hydraulic way by hand up to 10 mm and painted with (water) proofing. It can be polished now to let the material seem like monolithic polished natural stone.

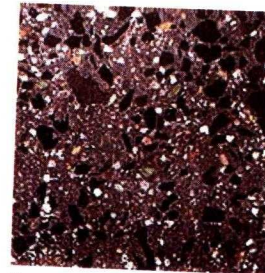
The black monolith glows in various colours depending on the light. It shimmers in green, silver, blue, yellow and even golden in the evening sun - an astonishing spectrum for a black object. At a closer look it even seems like a pixel picture.



Grinding down of concrete wall



(Water) proofing of concrete wall

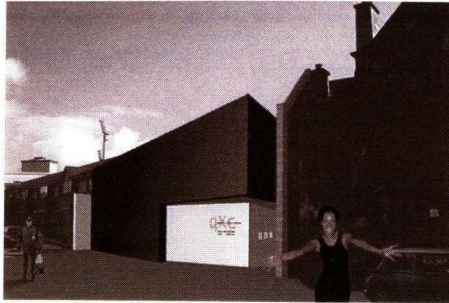


Pixel picture



Finish of wall

The secretive and inexplicable colour black reflects a subtle coexistence of the new building adjacent to the sensitive historical one.



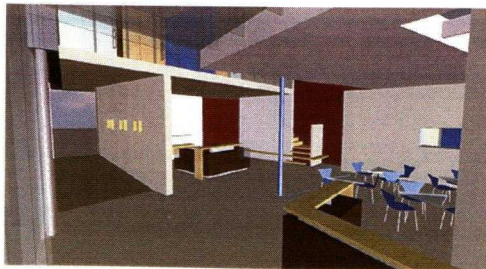
Proposed streetscapes



The interior

Inside the building predominantly bright materials and surfaces describe the contrast to the dark exterior. Some characteristic elements should be emphasised by colour or texture - like the red sandstone of the session house gable-end, the red wall at the stairway, the blue pillar or the specific use of wood.

The floor is covered with bright hardwood, natural stone and linoleum respectively. Flat oil-paint is being used both on the walls and the ceilings. Different types of glass like clear, frosted or holographic glass are being used.

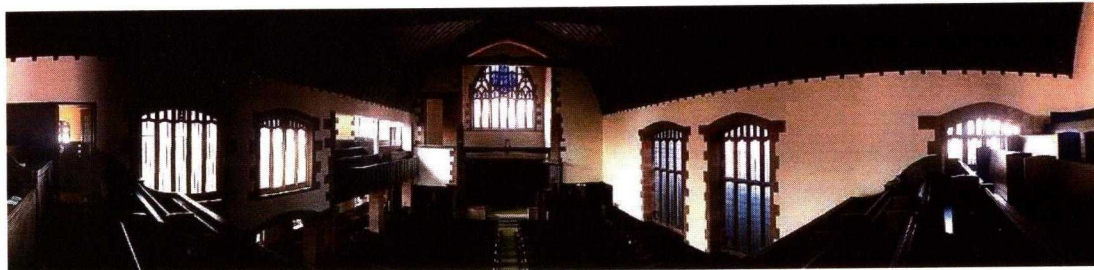


Proposed selection of colours inside



5.2.8 Light

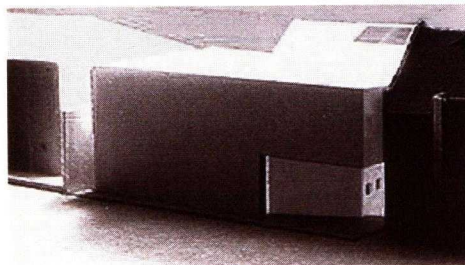
Light is the decisive element for the perception of space and atmosphere. QXC is an excellent example for natural light creating a calm, subtle and pleasant atmosphere.



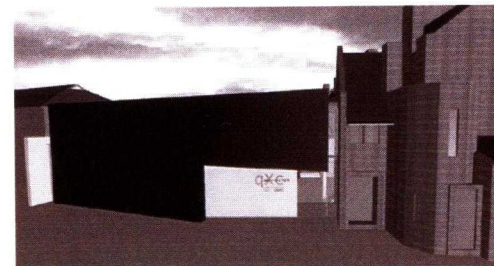
Panoramic view from (distorted) rear gallery

The exterior

Narrow glazing on both sides of the front facade as well as between the recessed entrance wall and the exterior wall illuminates the edges of the new building. Light fittings recessed inside these glass panels even let the building float in the air during the hours of gloom and darkness. Uplights recessed in the ground give the building a basic lightness. They should be softer than the uplights surrounding the church.



Illuminated scene



Glazing between old & new

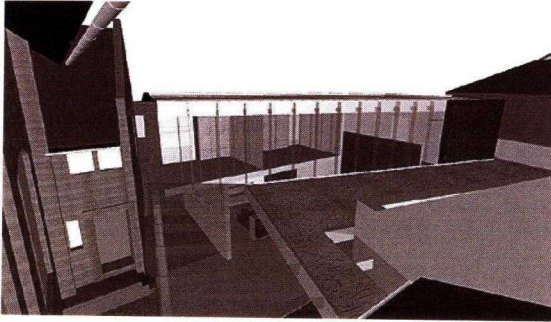
5. new scheme

conversion & extension of queen's cross church, glasgow

The interior

Large structural glazing on the courtyard side provides the building with sufficient natural light. The void space inside enables direct morning sunlight to reach the whole depth of the two-storey building.

Indirect even light, which is ideal for working, illuminates the upper level.

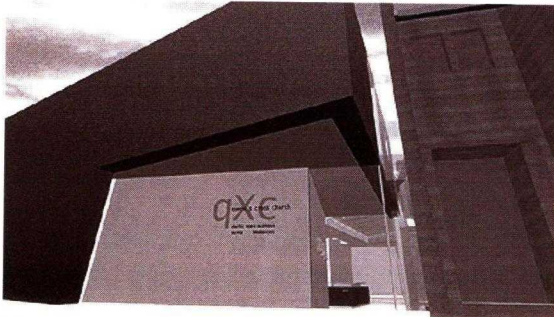


Structural glazing on courtyard side

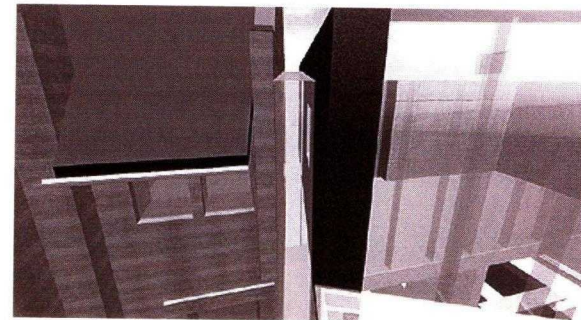


Lighting conditions 1-200

Wherever the new building is linked to the old one, narrow toplight elements illuminate the existing walls and highlight the texture of the wall (e.g. session house gable-end).



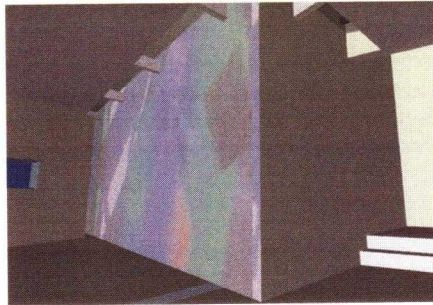
Glass panels at gable-end



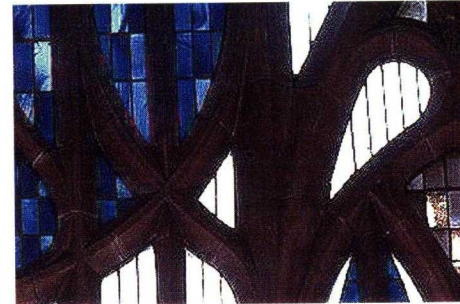
Glass panels at gable-end

A special lighting effect is used at the coffee bar/church hall wall:

The 50 cm wide toplight element is a holographic glass which refracts the spectral colours of natural light and thus projects various multi-coloured patterns on the wall. To me this reflects the idea of a stained glass window which CRM often used for a subtle accentuation.



Holographic projection



Stained glass window, QXC

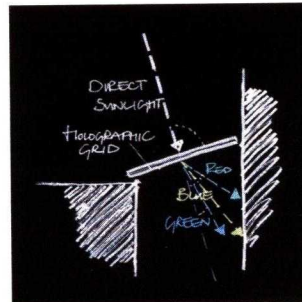


Diagram holographic glass



View of coffee bar

6. Postscript

I have to admit that this final scheme was the most difficult challenge of my studies but it was also the most interesting and sophisticated task, which I thoroughly enjoyed.

In my report I have shown a feasible conception for QXC which I believe caters for all the present requirements. I tried to react subtly to the sensitive setting of QXC to underline its historical and architectural importance.

I would be happy if those who are involved in the project could benefit from my work and the official QXC-Project could be continued soon. I benefited very much from working on this project and I hope to produce an open discussion with the CRMS and with the people involved.

I could not have done this without the help and support of the following friends:

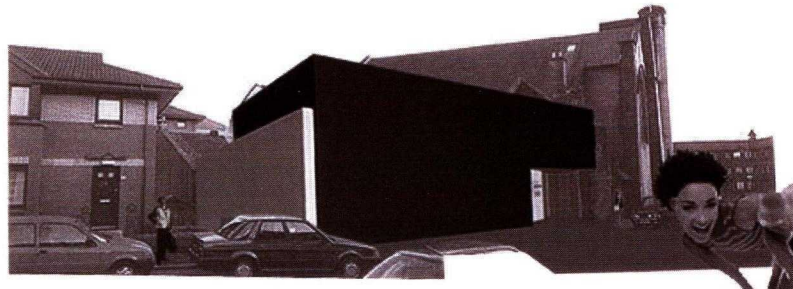
Kristina, David, Henry, Ian, Patricia, Evelyn, the CRMS, Veronique, Carsten, Anne, my family, Christopher at the Glasgow Planning Department, the employees of the Mitchell Library Archives and the kids living next door to the church - thank you so much!

I hope Mackintosh would approve!

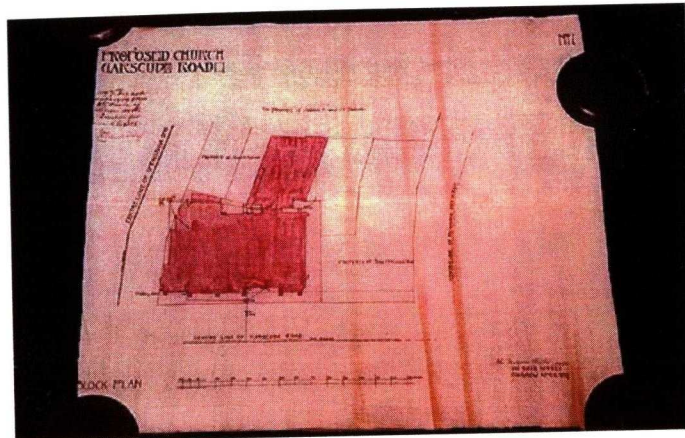
Address:

Christoph Jordan
Luetzowstr. 7
95448 Bayreuth
Germany

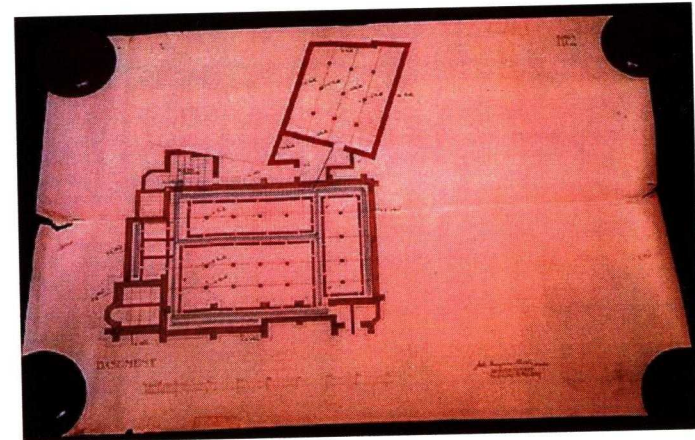
Tel. 0049-0179-4667356
Fax. 0049-921-97215
E-mail christophjordan@gmx.net
Internet www.christophjordan.de



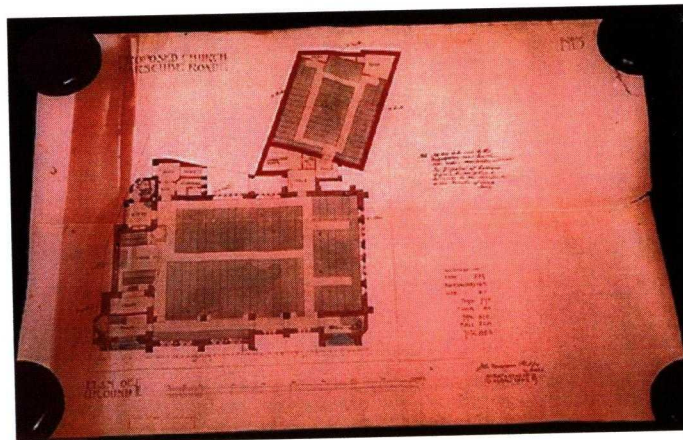
The existing original plans



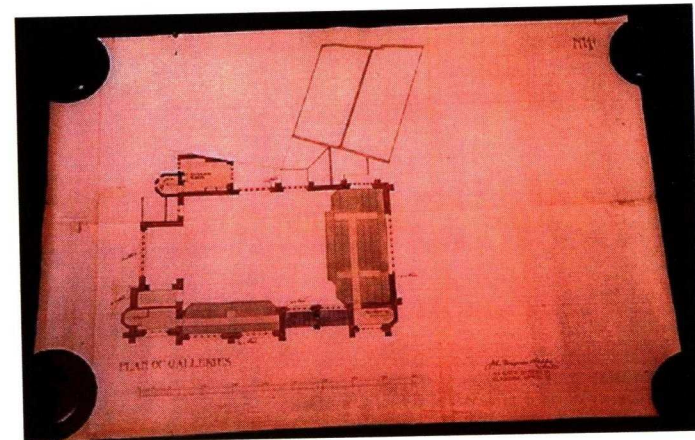
Block plan



Basement plan



Ground floor plan

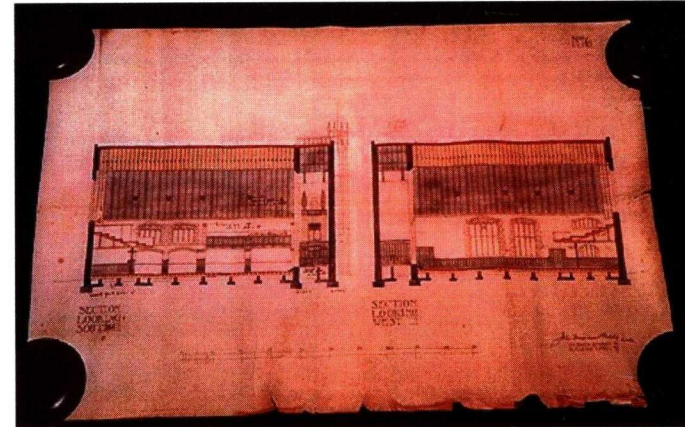


Plan of galleries

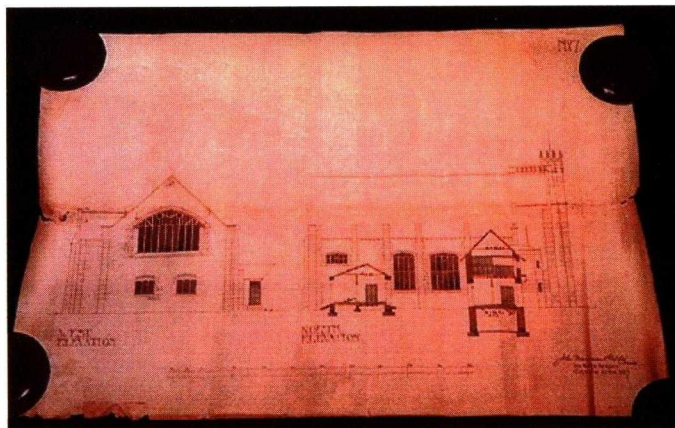
The existing original plans



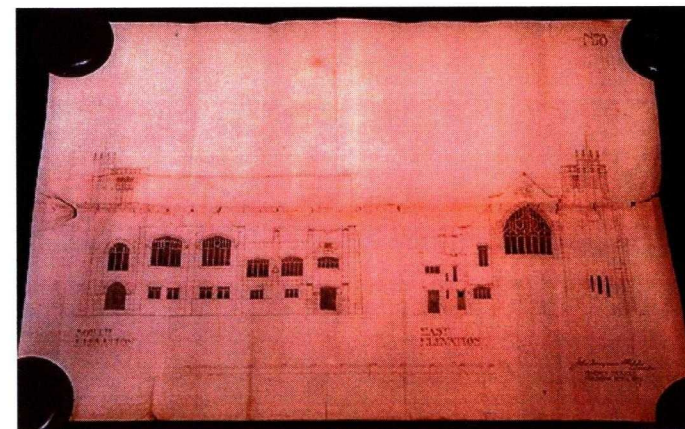
Cross sections



Longitudinal sections



Elevations



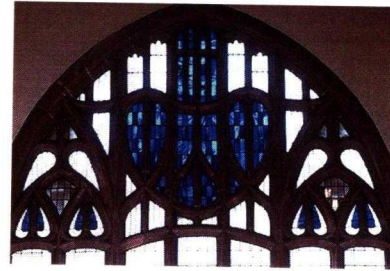
Elevations

1. View of chancel 1989



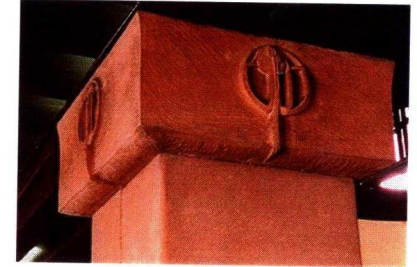
1

2. Stained glass window west



2

3. Stone carving at posthead



3

4. Warehouse gable-end



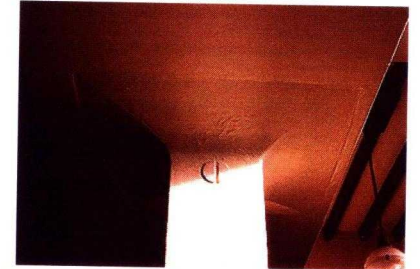
4

5. Side gallery



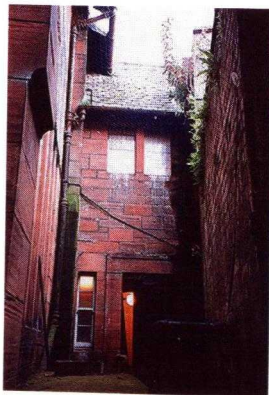
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6. Steel posthead



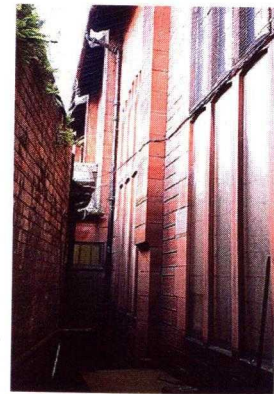
6

7. Yard towards session house



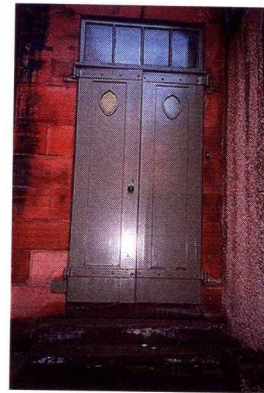
7

8. Yard towards cloakroom



8

9. side hall entrance



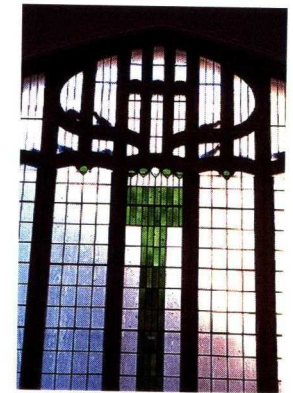
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10. Podium cloakroom



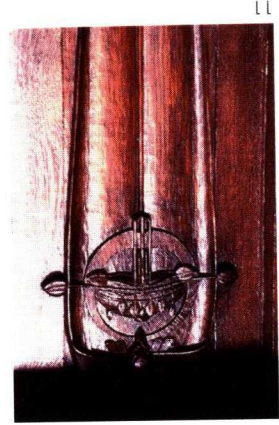
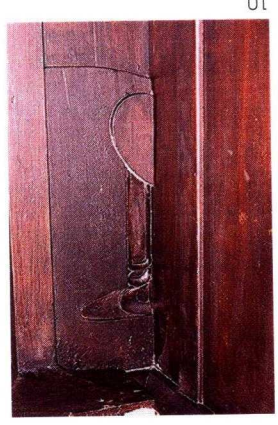
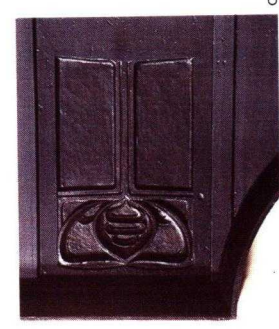
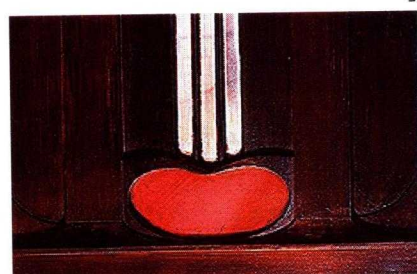
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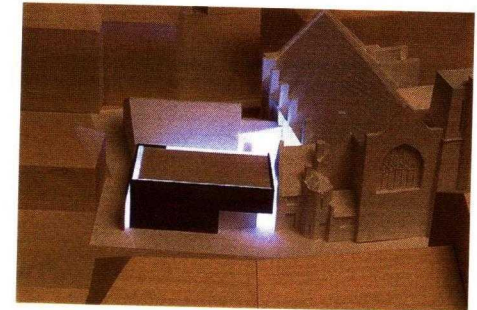
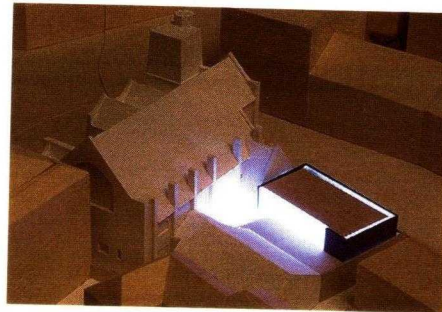
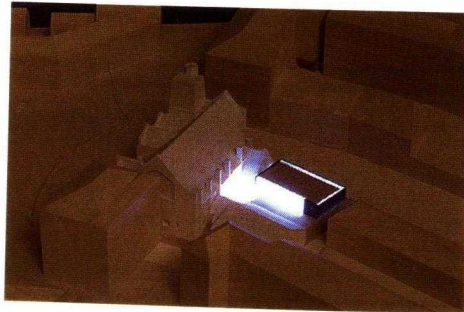
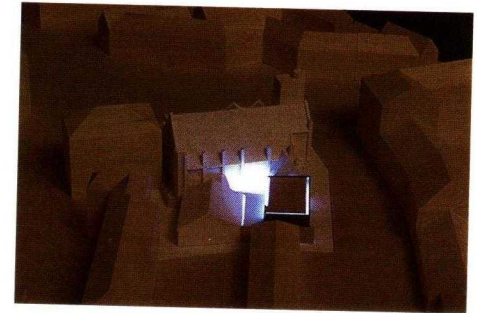
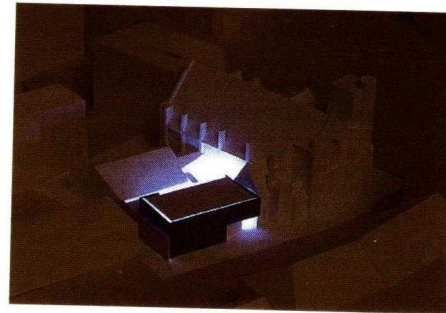
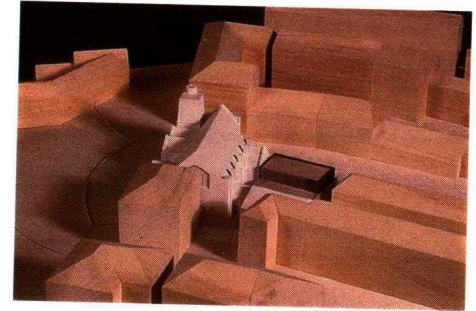
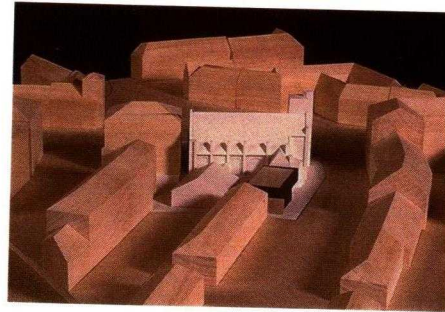
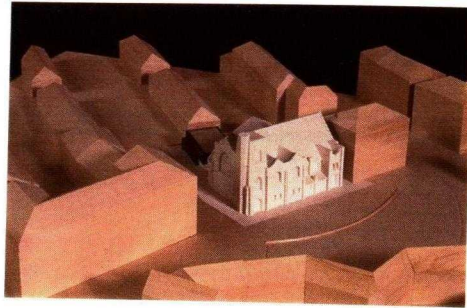
11. Stained glass window east

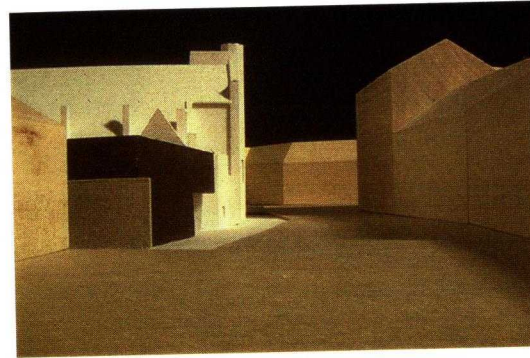
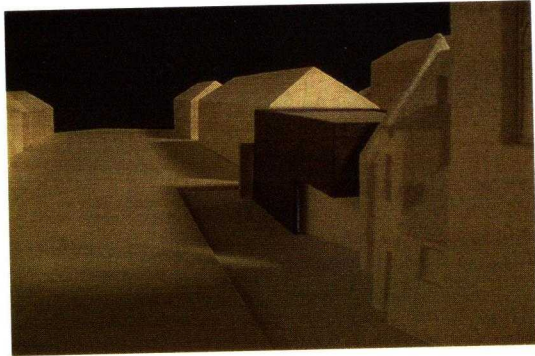


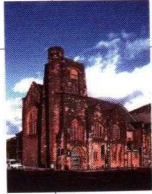
11

- 1. View from Maryhill Rd. west
- 2. View from Garscube Rd. east
- 3. View from Maryhill Rd. south
- 4. Glasgow towers
- 5. Door detail
- 6. Detail of west staircase
- 7. Detail former gas lamp
- 8. Detail at chancel
- 9. Detail at church hall
- 10. Detail at door podium
- 11. Detail at pulpit









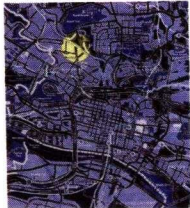
existing situation

queen's cross

Existing situation

The immediate urban environment of the church is varied and generally unsympathetic to the high architectural order of the church. The church is flanked on Garscube Road to the south by low grade industrial units beyond the neighbouring tenement. To the west the existing four storey sandstone tenement is a neutral neighbour. Here the ground floor function is commercial and undistinguished. To the north Springbank Street manifests as a new build housing development of three storey / two storey buildings and again is undistinguished. Immediately adjacent to the north gable of the church is a decaying hoarding protecting a gap site between the church and the new housing block. To the south the traffic junctions serving Mayhill Road and Garscube Road cross the church to the north side. The southern flanking buildings are relatively new units built by Queen's Cross Housing Association. Traffic at this point is heavy and noisy. In short the church could be regarded as an architectural oasis in a largely nondescript urban environment. The area is also highly populated with children and ongoing minor vandalism is a real issue. Any intervention should acknowledge this factor.

Map city centre Glasgow



Back plan QX



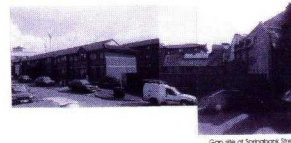
View from Mayhill Road



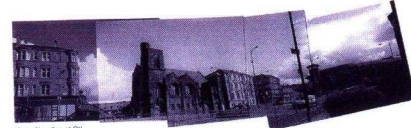
View from Mayhill Road



Panoramic view of Junction of GX



Gap site at Springbank Street



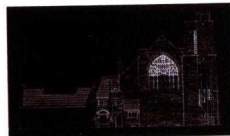
View of junction of GX



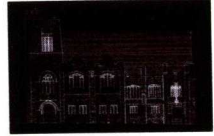
Gap site at Springbank Street



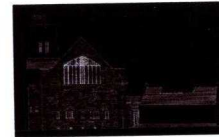
Panoramic view from tower



Elevation west



Elevation south



Elevation east



Panoramic view from rear gateway

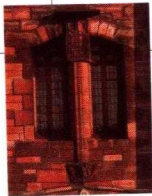


Panoramic view from pulpit



Charles Rennie Mackintosh
1868-1928

Mackintosh joined the architectural practice of John Honeyman and Keppie in 1889, as a junior draughtsman. He attended evening classes at Glasgow School of Art from 1883 and through this developed friendships in the artistic community with the architectural circles of his main employment. In June 1896 he began work on the competition to design a new School of Art in Renfrew Street, Glasgow (1896-9 and 1907-9), for which he has become world renowned. In the following years he began work on the design of Queen's Cross Church (1897-99). His most creative years were the dozen or so, which date from this time. In 1900 he designed Windhill, Kilmacross near Glasgow. Miss Cranston's Ingram Street Tea Rooms and the Daily Record building. In the same year he also exhibited at the Eighth Secession Exhibition in Vienna. The Hill House, Helensburgh followed in 1902 and the next years work began on the Willow Tea Rooms for Miss Cranston, and Scotland Street School for the School Board of Glasgow.



redevelopment

church & surroundings

Redevelopment of QXC

Over 100 years after the church was built (1897/99) its present exterior condition is quite bad. Visible major damages of the exterior stonework caused by the heavy and noisy traffic are a big issue. In addition rain has caused abnormal dampness in some parts of the exterior wall. Experts should be consulted on this damage. The traffic situation of Queen's Cross should be reconsidered to minimise the effects of pollution on the stonework of QXC. Traffic from Maryhill/Beardon for the M8 Edinburgh should follow the route to the City Centre, then turn left at the next junction to begin the through route. The closure of Garscube Road to traffic at Queen's Cross would create an oasis which would acknowledge the importance of the sensitive architecture of QXC. A traffic-calmed square would emerge in front of the church and the blocked off area could be used for visitor parking of coaches and cars.

General map



A further redevelopment measure for the stonework would be the cleaning of the exterior walls to give back the red sandstone its colourful freshness and brightness and to remove the dust and dirt of the past. It has to be thought carefully whether high-pressure water would be a suitable means since the detailed stone carvings of the church must not be damaged. The slate roof should be checked for leaks and damages to the gable-end, the gutters and the downpipes. The transparency of the window glass both the original leaded and the stained glass, could be considerably improved by removing the existing perspex window shields or the metal grids and replacing them by a new protection system.

Urban development 1-500



conversion & extension of queen's cross church, glasgow

prof.a.grünig prof.dr.s.back christoph jordan fh coburg

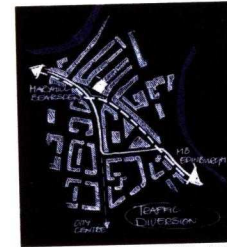
Urban development

The neighbouring tenement gate at the east side of the church in Garscube Road should be refurbished to improve the quality of the side lane and to show the contrast of the red and blond sandstone. Springbank Street should be blocked off at the beginning of the gap site to create a pedestrian zone around the tenement building. First Street should be reopened. The diversion of Garscube Road straight line would create a traffic-calm transition with an open space in front of the church of Queen's Cross. In order to get a visible and physical barrier between the street and new Queen's Cross Square, this platform could be set on a higher level - one height that surrounds the church like a frame. To clarify that difference in height a low wall with integrated seats and downlights could be set. The square should be pedestrianised, only coaches would be allowed to use it as a drop off for visitors as well as vehicles carrying handicapped people. Alternatively two or three steps with integrated downlights could enclose the square. A new street surface, e.g. granite stone, should surround the church to emphasise this sensitive area.



View of Junction of QXC

In addition to the glazed main doors of the church an external signage is necessary. A banner could be placed at Queen's Cross Square showing operating hours or special events and exhibitions. In order to secure the area around the church the present security camera at Queen's Cross should be moved next to the telephone boxes. An additional one should be placed in Springbank Street adjacent to the new building. New exterior lighting surrounding the church should carefully elevate the building slightly out of the context to underscore its importance. Uplights recessed in the ground could safely provide an external reading of the building.



traffic handling at QXC



Existing metal grids & perspex shields



Damaged stonework



Damaged stonework



Damaged stonework

diploma project 2001



new scheme

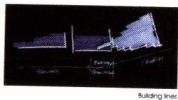
ground floor plan 1-100

conversion & extension of queen's cross church, glasgow

prof.a.grünig prof.dr.s.bock christoph jordan fh coburg

Principles

The intention of a new building linked with QXC is to provide space and facilities for the CRM and the QXC visitors. Furthermore the extension should represent modern architecture of high quality.
What is high quality modern architecture?
I believe there are several factors playing together to create that kind of architecture: brief, analyses & reactions, consultation, organisation, proportions, details, materials & finish and light.



Building line

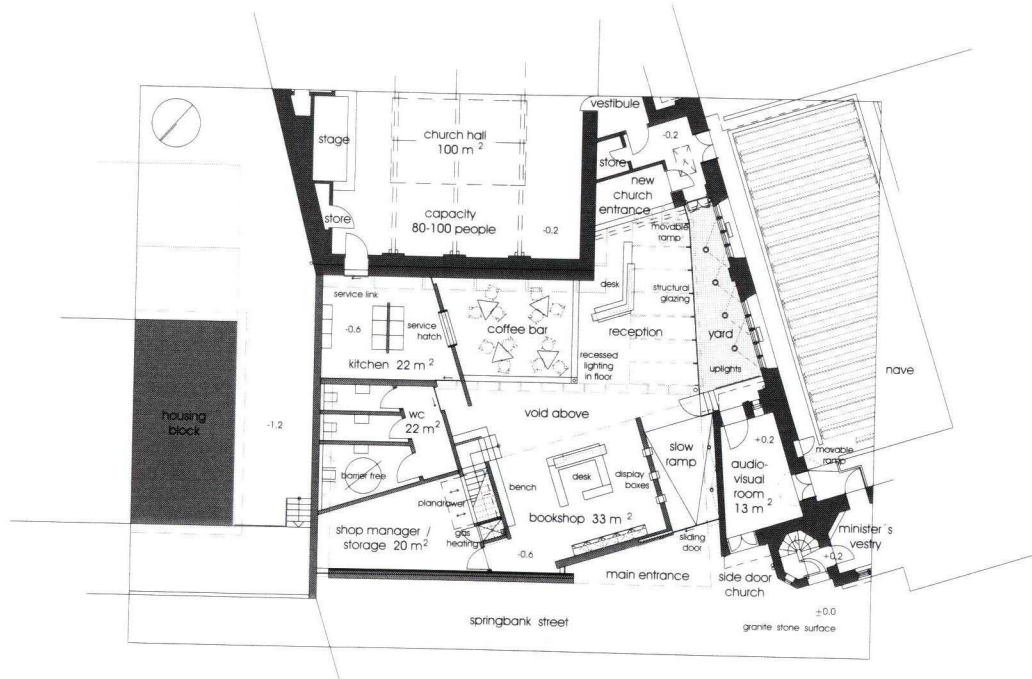
Realisation

Designing a new building linked to an old one is a very difficult task. QXC plays a significant role in the history of Glasgow, CRM and architecture. Thus a wide background knowledge and a detailed analysis is indispensable.

The site itself shows a pleasant break in the urban block, a break that somehow lets two extreme contrasts like the church and the housing block coexist. But since there is nothing in this space it becomes a public dump and an illegal playground.

I believe this site is destined to the contrasts of size, shape, age and function. My reaction shows a building that uses the neighbouring site to its maximum size and closes the urban block without creating a new gap. My extension is an introverted sculpture-like building, which does not reveal its structure or function and does not stand out. It wants to underline the importance of the historical site. It also links two different building lines in Springbank Street.

A concrete wall to the north appearing as a shield against vandalism clearly defines the site towards the neighbouring housing block. Kids living next door are allowed to use this wall as a creative screen to paint on or to play with.



New yard

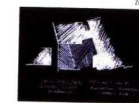
Organisation

The condition for a practical and functional organisation of the new building is the opening up of the present yard towards the gap site, the hinge between old and new. The existing brick wall of the yard and the exterior kitchen wall with its pitched roof will be removed to allow a spacious, bright yard to be introduced. The basis of a good organisation is an obvious entrance. In this case a bright access in the dark exterior wall shows the only opening in the street elevation. Entering the building through that niche visitors first experience the contrast between the top lit end stone of the session house gable end and the bookshop wall with its display boxes. A slow ramp finally leads them to the reception area. This foyer can easily take on a coach load of fifty people.

Simplifying different building lines on the site the yard as a whole shows a basic geometrical shape referring to the church's north exterior wall. Apart from the wall limiting the site to the neighbouring building another one divides it into two sectors.

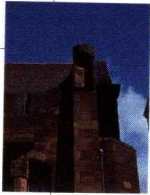
Primary, active zone:
entrance, reception, bookshop, coffee bar
Secondary, passive zone:
kitchen, toilets, storage

While sitting in the coffee bar visitors can enjoy the open view towards the church wall. They can watch people entering, leaving and spending time in the bookshop. They can even notice movements upstairs. The whole ground floor is a barrier free area: whenever there are steps to climb movable ramps can be easily used to meet wheelchair demands.



Zones





new scheme

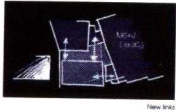
first floor plan 1-100

'conversion & extension of queen's cross church, glasgow'

prof.a.grünig prof.dr.s.bock christoph jordan fh coburg

Organisation

The whole CRM-management area, located on the first floor and separated from the public zone, contains offices, staff day room, boardroom, toilet and a study area. The upper level is linked to the session house, where the archive and the reference library are situated. The link enables society employees to get into the church without using the public area on the ground floor.

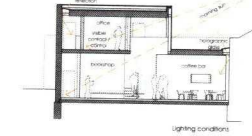
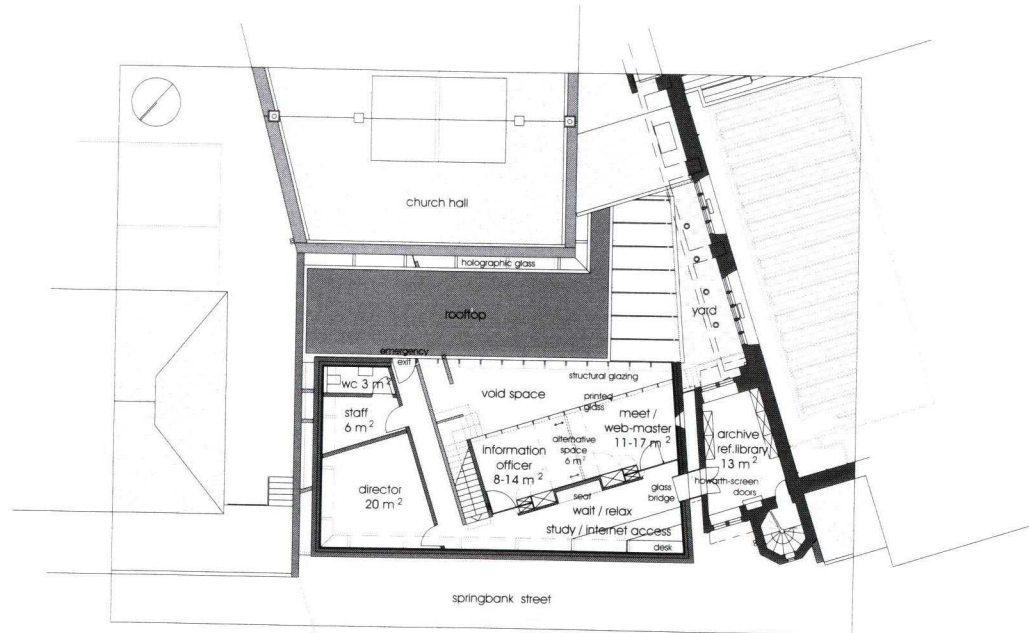


Links

In order to preserve the historical building sensitively, the extension building is just linked to the old one in three points: The main link is situated in the former kitchen which is now the new church entrance. The second one links the new kitchen with the church hall (this connection could be used for catering during events) and the third link is the first floor glass bridge to the session house. It connects the archive/reference library with the new building. All contacts between old and new are realised subtly with transparent 50 cm glass panels.

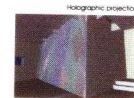
Materials & finish

Inside the building predominantly bright materials and surfaces describe the contrast to the dark exterior. Few characteristic elements should be emphasised by colour or texture - like the red sandstone of the session house gable-end, the red wall at the stairway, the blue pillar or the specific use of wood. The floor is covered with bright hardwood, natural stone and inlaid respectively. Flat oil-paint is being used both on the walls and the ceilings. Different types of glass like clear, frosted or holographic glass are being used.



Interior lighting

Light is the decisive element for the perception of space and atmosphere. QXC is an excellent example, where natural light creates a calm, subtle and pleasant atmosphere. Large structural glazing on the inside provides the building with sufficient natural light. The void space enables direct morning sunlight to reach the whole depth of the two-story building indirect even light, which is ideal for working, illuminates the upper level. Whenever the new building is linked to the old one, narrow daylight elements illuminate the existing walls and highlight the texture of the wall (e.g. session house gable-end). A special lighting effect is used at the coffee bar/church hall wall: the 50 cm wide daylight element is a holographic glass which reflects the spectral colours of natural light and thus projects various multi-coloured patterns on the wall. To me this reflects the idea of a stained glass window CRM often used for a subtle accentuation.





new scheme

roof plan 1-100

Consultation

I need to discuss the project with many different people involved, such as CRMS members, CRM experts, the architects, friends and last but not least the kids from next door. These kids who live in the Home for displaced children told me about the gap site always having been their playground. They did not care about the significance of QXC. Its famous architect and its positive effect on the Mayhill district. They wanted to have either a skatepark or a roller coaster for 'their' site.

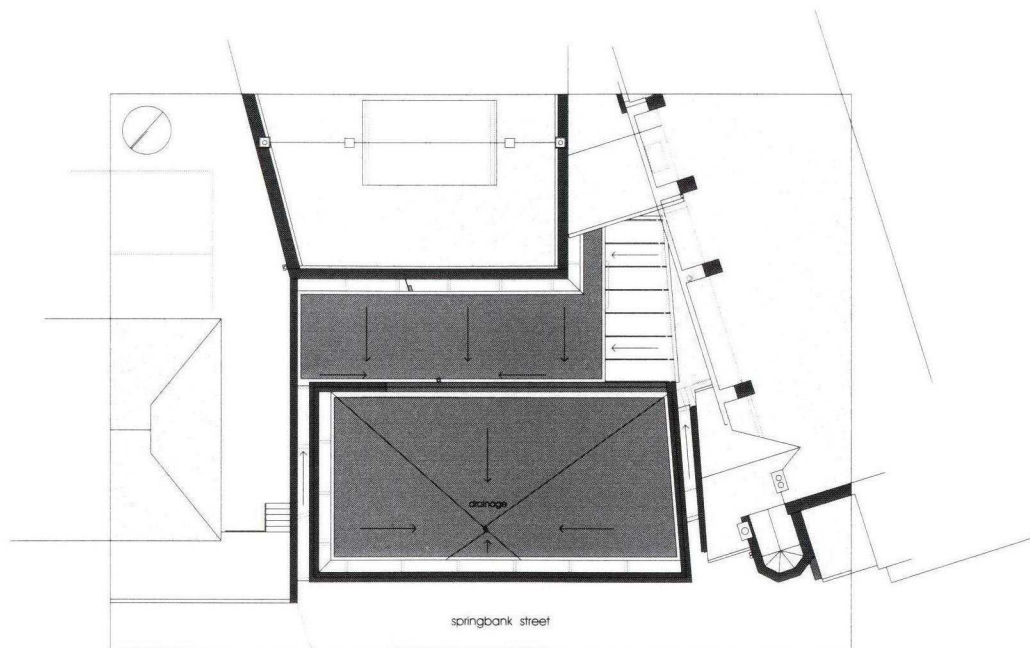
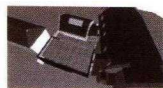


The kids' proposal

I believe a major problem in the neighbourhood of QXC is the lack of green areas or parks especially for children therefore the gap site is an ideal substitute for such a need. We should try to integrate these kids into Society events or church maintenance, however this might be realised.



The kids' favourite proposal



conversion & extension of queen's cross church, glasgow

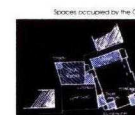
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View from church tower

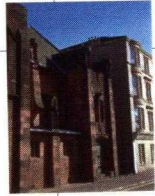
New conception for QXC

As it is the aim to deal all the spaces in the historic building presently occupied by the CRMS (such as offices, archive, souvenir shop, storage, kitchen, toilets), there is a need for a new building adjacent to the church. It should provide enough space for all demands of the Society and the statutory authorities (Historic Scotland, Planning, Conservation, Building Control). It is also important to know the history of QXC to rebuild the original state. There were several major alterations particularly inside the church which are to be restored to the original state in my scheme. The purposes of the QXC-Project are to strengthen the status of the building as a masterpiece of CRMs and therefore to encourage the awareness and to emphasise its role as a gateway for CRMs sites in Glasgow and surrounding areas. Further improvement aims are necessary in order to increase visitor numbers, visitor stay, visitor spend, quality of visitor experience and to simplify the visitor access.



Spaces nominated by the CRMS

diploma project 2001



new scheme

elevations 1-100

Proportions

My intention to close the gap towards Springburn Street led me to concentrate volume to this side. So I used the existing access levels both of the session house and the housing block to set a limit of height for the new building in between. The only opening in the facade shows a human dimension and clearly marks the main entrance. The two story building describes a well fitting counterpart to the volume of the church hall.



Materials and finish

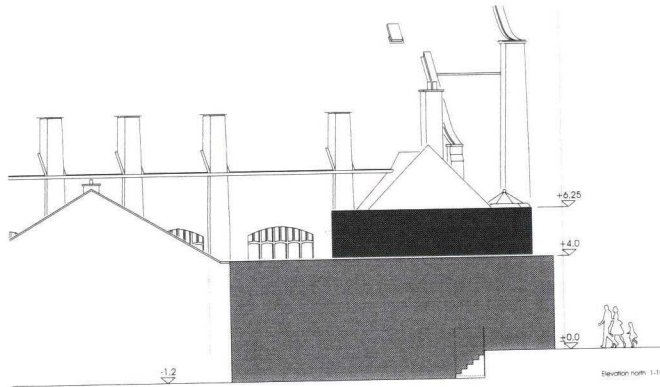
The materials of the new building should be selected carefully to achieve durable high quality architecture. The specific use of modern materials e.g. glass, stainless steel or polished concrete clearly marks new elements in an old setting.

The material of the exterior wall is the most decisive element of my design.

A black polished concrete facade which is unevenly finished, almost like a work of art, shows a durable, vandal and graffiti-resistant wall. It is a high quality modern finish which was, after many tests, first used at the Art Gallery in Vaduz, Liechtenstein.

The black monolith glows in various colours depending on the light. It shimmers in green, silver, blue, yellow and even golden in the evening sun - an astonishing spectrum for a black object! At a closer look it even seems like a pixel picture.

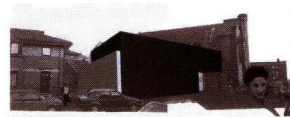
The secretive and inexplicable colour black reflects a subtle coexistence of the new building adjacent to the sensitive historical one.



Elevation north 1:100



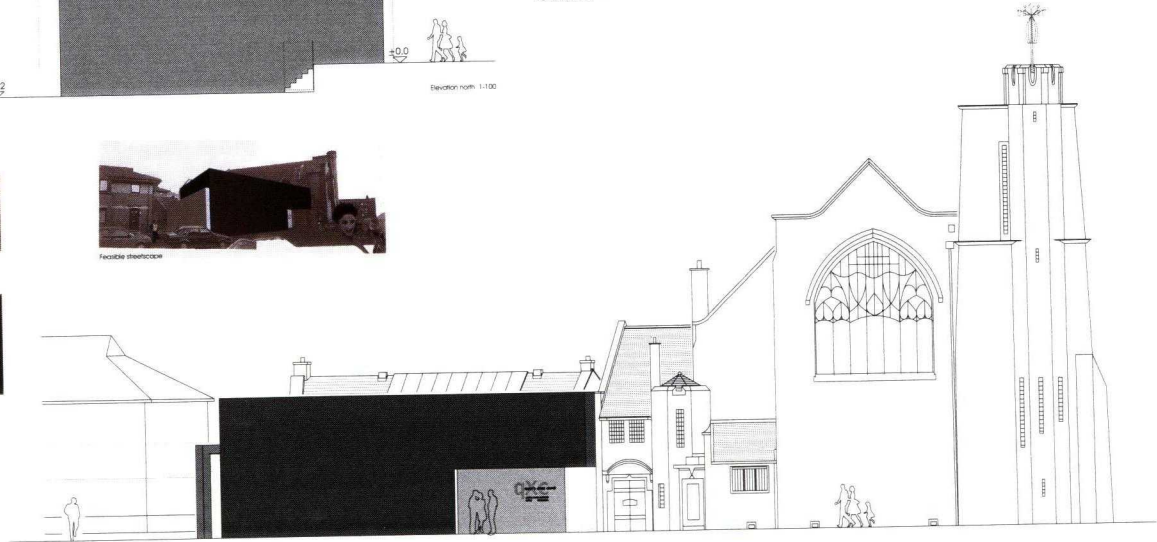
Feasible streetscape



Feasible streetscape



Proposed entrance



Exterior lighting

Narrow glazing on both sides of the front facade as well as between the recessed entrance wall and the exterior wall illuminates the edges of the new building. Light fittings recessed inside these glass panels even let the building float in the air during the hours of gloom and darkness. Uplights recessed in the ground give the building a basic lightness. They should be softer than the uplights surrounding the church.



Illuminated scene



Feasible streetscape

diploma project 2001